1		NATURE OF ELECTRIC CURRENT	1
	1.1		1
	1.2		2
	1.3	DIRECT AND ALTERNATING CURRENT	3
	1.4	HARMONIC WAVES	5
	1.5	AVERAGE AND RMS VALUES	7
	1.6		
2		ELECTRICAL APPLIANCES	11
	2.1	RESISTANCE, INDUCTANCE AND CAPACITANCE	11
	2.2	ELECTRIC CIRCUIT COMPOSED FROM MORE PARTS	14
	2.3	PHYSIOLOGICAL EFFECTS AND INJURIES BY ELECTRIC CURRENT	18
	2.4	ADDITIONAL NOTES	19
3	3 ELECTRIC ENERGY DISTRIBUTION		
	3.1	POWER AND ENERGY	
	3.2	THREE PHASE SYSTEM	22
	3.3	ACTIVE POWER ALLOCATION AND DEVICE EFFICIENCY	26
	3.4	VOLTAGE LEVELS IN THE DISTRIBUTION NETWORK	27
	3.5	DISTRIBUTION NETWORK	
	3.6		
4		INDUSTRIAL PRODUCTION OF ELECTRIC ENERGY	33
	4.1	ELECTROMOTIVE FORCE AND TERMINAL VOLTAGE	33
	4.2	ELECTROMAGNETIC INDUCTION.	35
	4.3	ROTATING GENERATORS	
	4.4	THERMAL POWER STATIONS	
	4.5	WATER POWER STATIONS	
	4.6	TRANSFORMERS	42
	4.7		
5		CHEMICAL AND RENEWABLE ENERGY SOURCES	45
	5.1	CHEMICAL CELLS	45
	5.2	FUEL CELLS	48
	5.3	SOLAR CELLS	49
	5.4	SOME OTHER KINDS OF SOURCES	51
	5.5	ADDITIONAL NOTES	
6		ELECTRIC SIGNAL AS A CARRIER OF INFORMATION	55
	6.1	EXPRESSION OF INFORMATION BY VOLTAGE AND CURRENT	
	6.2	RELATION BETWEEN ANALOGUE AND DIGITAL EXPRESSION	56
	6.3	ELECTRONIC DATA	58
	6.4	INPUT AND OUTPUT DEVICES	60
	6.5	ADDITIONAL NOTES	62
7	21	SIGNAL TRANSMISSION	63
	7.1	CABLE LINES	
	7.2	WIRELESS TRANSMISSION	65
	7.3	FREQUENCY BANDS	67
	7.4	ANTENNAS	68
	7.5	DATA TRANSMISSION	69
	7.6	ADDITIONAL NOTES	71
8		LOGICAL CONTROL CIRCUITS OF ELECTRIC DEVICES	73
	8.1	POWER AND CONTROL CIRCUITS	
	8.2	LOGICAL CIRCUITS	74
	8.3	CONTROLLERS	77
	8.4	ACTION UNITS	79
	8.5	ADDITIONAL NOTES	80

9 E	LECTROMECHANICAL EQUIPMENTS	83
9.1	THE FORCE CAUSED BY MAGNETIC FIELD	83
9.2	ELECTROMAGNETS	84
9.3	TORQUE	86
9.4	DC MOTOR	
9.5	THREE PHASE AC ROTATING MACHINES	89
9.6	ADDITIONAL NOTES	92
10	ELECTRIC ENERGY CONVERTORS	93
10.1	POWER SEMICONDUCTOR DEVICES	93
10.2	SEMICONDUCTOR RECTIFIERS	
10.3	ANOTHER TYPES OF SEMICONDUCTOR CONVERTERS	99
10.4	ADDITONAL NOTES	
11	CONTROL OF ELECTRIC EQUIPMENT BEHAVIOUR	
11.1	THE ROLE OF A CONTROLLER	
11.2	CONTROL LOOPS	
11.3	CONTINUOUS CONTROLLER TYPES	106
11.4	CONTROLLER ADJUSTEMENT	
11.5	ADDITIONAL NOTES	
12	MATERIALS FOR ELECTRIC EQUIPMENT	
12.1	INSULANTS	
12.2	SEMICONDUCTORS	
12.3	CONDUCTORS	
12.4	MAGNETIC CIRCUITS	
12.5	MAGNETIC MATERIALS	
12.6	CONSTRUCTIONAL MATERIALS	
12.7	ADDITIONAL NOTES	
13	TECHNICAL REQUIREMENTS ON PRODUCTS	
13.1	TECHNICAL STANDARDIZATION	
	ELECTRIC EQUIPMENT AND ECOLOGY	126
13.3	THE LAW ABOUT TECHNICAL REQUIREMENTS ON PRODUCTS	
13.4	ADDITIONAL NOTES	129
14	GETTING STARTED WITH LABORATORY SYSTEM RC2000	
14.1	SYSTEM MODULES	
14.2	PC MEASURING UNIT - ADDU	136
14.3	PROGRAM "TWO CHANNEL OSCILLOSCOPE"	
15	EXPERIMENTS WITH LABORATORY SYSTEM RC2000	
1011	AC POWER SUPPLY WITH RESISTIVE LOAD	
15.2	AC POWER SUPPLY WITH INDUCTIVE LOAD	
15.3	AC POWER SUPPLY WITH CAPACITIVE LOAD	
15.4	MEASUREMENT OF AC ACTIVE POWER P	
15.5	SERIAL RLC CIRCUIT – RESONANCE EFFECT	
15.6	1-PHASE NON CONTROLLED SINGLE PULSE RECTIFIER – RL LOAD 1-PHASE NON CONTROLLED SINGLE PULSE RECTIFIER – RC LOAD	
15.7 15.8	SERIAL RC CIRCUIT – TRANSIENT PROCESS	
	SERIAL RC CIRCUIT – TRANSIENT PROCESS	
15.9 15.10		
15.10		1.61
15.11		163
15.12		
15.13		
13.14	SISTEM WITH I-CONTROLLER - VARIATION OF II	10